



HOW TO...

Make seamless tiles

Tiling a favourite image can give striking results, but you won't get perfect picture tiling if the edges don't match up. Adam Banks shows you how to smooth those rough edges using Photoshop Elements 3

Websites, PowerPoint slides and the Windows desktop are all commonly decorated with repeating graphics. There are many off-screen uses for repeating patterns, too. But how do you create a pattern or texture that will repeat, or tile, across an area with no visible joins?

Armed with your digital camera, it won't be difficult to find suitable raw material. The problem is making the image tile seamlessly. If you shoot a substance such as grass, which is very irregular, you might just about get away with tiling a rectangle cropped straight from a photo and the joins won't be noticeable except on very close inspection. If the image is more distinctly patterned, however, straight lines will be seen clearly along the edges, cutting through the tiled area from top to bottom and left to right.

Fortunately, if you use a bit of lateral thinking, there is a way to convert a photo into a seamless tile. Consider why an ordinary photo doesn't tile seamlessly. Stating the obvious, it's because the edges don't match up to each other. If you could tweak the right-hand edge to make it match the left-hand edge, it would tile, and the same goes for the top and bottom. You need a way of seeing the left and right edges next to each other while you edit them. This is provided by the Offset filter in image-editing software, which shifts the whole image a given number of pixels across or down, 'wrapping' the remainder around to the opposite side. This leaves you with exactly the same picture, but with the edges meeting in the middle.

This isn't as mind-bending as it sounds. You can now use tools such as Clone Stamp to edit the joins until they look seamless. Once that's done, you

have a tileable image: you know the bits at the edges are going to match when the image is repeated, because they were originally united in the middle of the image. You can return the picture to its original crop by applying the reverse offset to shift the pixels back again.

The task of tiling is made much simpler if you follow our walkthrough using Photoshop Elements 3. However, similar commands can be found in most image editors. You will find the original and finished versions of the image on the cover disc; they are titled Wall.jpg and WallTile.jpg respectively.

1 Crop the photo of your texture to get as close as possible to a seamless tile. Here, the stone wall has been cropped so the edges of the stones fall at the edges of the image. An even number of courses (rows) is used so they will alternate correctly when tiled.

2 Test your tile by saving in a standard format such as .JPG, then loading it as a Windows' desktop background. Right-click on the desktop and click Properties, then select the Desktop tab and click Browse. Open your saved file, then set the Position option to Tile. Click Apply to see how it looks. If you look at the picture, it's obvious that the tile isn't seamless. The vertical join is clearly noticeable as it bisects one of the stones.

3 In Photoshop Elements, go to the Filter menu and select Other, Offset. In the dialog box, set the Horizontal and Vertical amounts to roughly a quarter of the image's width and height in pixels. Set Undefined Areas to Wrap Around, then click OK. The image shifts down and

to the right, with the right and bottom areas reappearing at the left and top. You can now see the tiling joins running across near the top and down the left of the image.

4 Press S or select the Clone Stamp Tool from the Tools palette. This allows you to graft one part of an image over another part. In the Tool Options at the top, make sure the Clone Stamp button is depressed, and not Pattern Stamp. Then choose a small, soft brush from the pick list. Set Mode to Normal and Opacity to 100%, and tick Aligned.

Identify an area of the image that would be suitable to copy over part of one of the joins. Hold down the Alt key and click where you want to copy from (the source). Release the Alt key, click on the corresponding area that you want to paint over, then hold down the mouse button and drag to clone the source material. Here, various parts of the middle stones on the left have been cloned over the join to turn them into a single stone, and the gap between the two stones at the top right is being cloned over the join at the left so that it looks more natural.

5 Once you've covered the joins to your satisfaction, go to the Offset command and type a minus sign (hyphen key) in front of the Horizontal and Vertical values. Press OK to shift the image back to its original position.

6 Inspect your finished image, which should look almost identical to the original. However, when you tile it now, it should do so seamlessly.

